

AMENDMENTS TO THE CLAIMS

1. (amended) A method for making a silicon micro-mold, comprising the steps of:

providing a silicon substrate, said substrate having top and bottom surfaces and a thickness therebetween;

forming an electrically conductive layer onto said bottom surface;

forming a photoresist layer onto said top surface;

aligning an image patterning mask onto said photoresist layer, wherein said mask having closed portions for blocking light and open portions for allowing light to pass through;

directing a source of broadband light onto said mask, thereby exposing portions of said photoresist layer lying beneath said mask open portions;

removing said mask;

developing said photoresist layer so that a portion of said photoresist is removed to expose areas of said silicon substrate, and a portion of said photoresist remains as a protective etch barrier; [[and]]

anisotropically etching said exposed areas of said silicon substrate through said substrate thickness to said electrically conductive layer, thereby providing a plurality of etched trenches comprising substantially vertical walls surfaces and floor surfaces comprising said electrically conductive layer; [[and]]

removing said remaining photoresist; and

oxidizing the surfaces of the silicon substrate after the step of removing said photoresist.

2. (canceled)

3. (amended) The method of claim 1, wherein the step of providing a silicon substrate comprises providing a silicon substrate that is an industry standard silicon wafer.

4. (amended) The method of claim 1, ~~wherein~~ further comprising the step of depositing ~~said a~~ metal layer ~~includes depositing a metal selected from the group consisting of the noble metal listed in New IUPAC Group Numbers 9, 10, or 11 of the Period Table of elements and alloys thereof~~ onto said exposed areas and said electrically conductive layer, wherein said metal layer fills said plurality of etched trenches.

5. **(amended)** The method of claim ~~[[1]]~~4, wherein the ~~first~~ step of depositing comprises depositing a metal layer by particle or thermal vapor deposition.
6. **(canceled)**
7. **(original)** The method of claim 1, wherein the step of forming a photoresist layer onto said substrate comprises spin-coating a Novolak photoresist layer on said substrate.
8. **(amended)** The method of claim 7, wherein the photoresist layer is about 2 ~~micron~~ microns thick.
9. **(original)** The method of claim 1, wherein the step of aligning an image patterning mask comprises aligning a positive trace image patterning mask.
10. **(original)** The method of claim 1, wherein the step of aligning an image patterning mask comprises aligning a negative trace image patterning mask.
11. **(canceled)**
12. **(amended)** The method of claim ~~[[2]]~~4, wherein the step of depositing said metal layer includes depositing a metal selected from the group consisting of the noble metal listed in New IUPAC Group Numbers 9, 10, or 11 of the Period Table of elements and alloys thereof.
13. **(original)** The method of claim 12, wherein said step of depositing said metal layer includes depositing a layer of gold.
14. **(canceled)**
15. **(canceled)**
16. **(canceled)**
17. **(canceled)**
18. **(canceled)**
19. **(canceled)**

20. (canceled)

21. (new) The method of claim 12, wherein said step of depositing includes depositing a layer of chromium followed by depositing a layer of gold.